Reporting Period: 06/16/2015 through 07/28/2015

The Niagara Falls Boulevard site (CERCLIS ID NYN000206699), hereinafter referred to as "the NFB site" or "the site", is located in a mixed commercial and residential area of Niagara Falls, New York. The site consists of two parcels, namely 9524 and 9540 Niagara Falls Boulevard. This site encompasses approximately 2.53 acres. Currently, the 9524 Niagara Falls Boulevard property contains a bowling alley and an asphalt parking lot; the 9540 Niagara Falls Boulevard property contains a building supply business and an asphalt parking lot. The properties are bordered to the north by a wooded area; to the east by a church; to the south by Niagara Falls Boulevard, beyond which is a residential area; and to the west by a hotel and residential area.

In 1978, the U.S. Department of Energy conducted an aerial radiological survey of the Niagara Falls region and found more than 15 properties having elevated levels of radiation above background levels. It is believed that, in the early 1960s, slag from the Union Carbide facility located on 47th Street in Niagara Falls was used as fill on the properties prior to paving. The Union Carbide facility processed ore containing naturally-occurring high levels of uranium and thorium to extract niobium. The slag contained sufficient quantities of uranium and thorium to be classified as a licensable radioactive source material. Union Carbide subsequently obtained a license from the Atomic Energy Commission, now the Nuclear Regulatory Commission, and the State of New York; however, the slag had been used as fill throughout the Niagara Falls region prior to licensing. Based on the original survey and subsequent investigations, it is believed that the radioactive Union Carbide slag was deposited on the NFB site.

In September/October 2006 and May 2007, NYSDEC conducted radiological surveys of the interior and exterior of both properties on several occasions using both an Exploranium-135 and Ludlum 2221 detectors. With the exception of an office area and storage space at 9540 Niagara Falls Boulevard that was constructed after the original building directly on top of the asphalt parking lot, interior radiation levels were relatively low. The highest reading in the newer area was 115 μR/hr; elsewhere throughout the building, radiation levels generally ranged between 10 and 20 μR/hr. Exterior readings taken at waist height generally ranged between 10 and 350 μR/hr, while the maximum reading of 600 μR/hr was recorded on contact (i.e., at the ground surface). At a fenced area behind the building located at 9540 Niagara Falls Boulevard, waist-high readings ranged between 200 and 450 μR/hr, and on-contact readings ranged between 450 and 750 μR/hr. Elevated readings were also observed on the swath of grass between the 9524 Niagara Falls Boulevard property and the adjacent property to the west that contains a hotel, and in the marshy area beyond the parking lot behind the buildings. Two biased samples of slag were collected from locations that exhibited elevated static Ludlum detector readings: one sample was collected from an area of loose blacktop that indicated readings of 515,905 cpm on the Ludlum detector, and one slag sample was collected in the marshy area that indicated readings of 728,235 cpm on the Ludlum detector.

During a reconnaissance performed by the NYSDOH and NYSDEC on July 9, 2013, screening activities showed radiation levels at 200 μR/hr with a hand-held PIC unit around an area of broken asphalt and 500 μR/hr from a soil pile containing slag at the NFB site. Readings over

600,000 cpm were recorded with a sodium iodide 2x2 scintillation detector from the soil and slag pile.

On September 10, 2013, USEPA Pre-Remedial Program and Weston Solutions conducted a gamma radiation screening of the 9524 Niagara Falls Boulevard property using a Ludlum 2221 Scaler Ratemeter.

On December 4–5, 2013, further radiological survey information was obtained from the 9524 and 9540 Niagara Falls Boulevard properties, as well as the church property located further east of the two site parcels. The highest gamma radiation screening results were recorded from the exposed soil area in the rear, northern portion of the 9540 Niagara Falls Boulevard property.

On December 5–7, 2013, USEPA documented the areas of observed contamination at the NFB site. The areas of observed contamination were delineated by measuring the gamma radiation exposure rates, and determining where the gamma radiation exposure rate around the source equals or exceeds two times the gamma radiation at site-specific background rates. The areas of observed contamination are defined by site-attributable gamma radiation exposure rates, as measured by a survey instrument held 1 meter above the ground surface, which equal or exceed two times the site-specific background gamma radiation exposure rate. At the NFB site, an area of approximately 168,832 ft^2 was found to have gamma radiation levels which exceed two times the background measurement of 8,391 cpm. PIC data were also collected at several points to confirm the boundary.

On December 11, 2013, USEPA Pre-Remedial Program and Weston Solutions collected a total of 16 soil samples (including one environmental duplicate sample) and three slag samples from fifteen boreholes advanced throughout the NFB site and the First Assembly Church property located directly adjacent to the east/northeast of the site property, using hollow-stem auger drilling methods. The two soil samples collected on the First Assembly Church property are to document background conditions. At each sample location, soil samples were collected directly beneath slag; at locations where slag was not present, the soil sample was collected at the equivalent depth interval.

The soil samples were analyzed for metals by inductively coupled plasma (ICP) technique and mercury by manual cold vapor technique in accordance with SW-846 Method 6010C and 7471B, respectively. In addition, soil and slag samples were analyzed for isotopic thorium and isotopic uranium by alpha spectrometry according to DOE method A-01-R, and radium-226 and radium-228 by gamma spectrometry according to DOE Method GA-01-R. Analytical results indicate concentrations of radionuclides found in the slag and soil to be significantly higher than at background conditions (i.e., greater than 2x background concentrations).

On April 28, 2014, USEPA Pre-Remedial Program and Weston Solutions collected radon and thoron concentration measurements from locations on and in the vicinity of the NFB site. At the selected locations in background areas, above the source material, and off the source area, radon and thoron concentration measurements in pCi/L were collected with RAD7 radon detectors. The radon and thoron measurements were collected at heights of one meter above the ground surface. The measurements included uncertainty values, which were taken into account to calculate

adjusted concentrations for evaluation of observed release in the air migration pathway. There were no radon or thoron concentrations that exceeded the site-specific background, nor were there any adjusted concentrations that equaled or exceeded a value two standard deviations above the mean site-specific background concentration for that radionuclide in that type of sample (i.e., there is no evidence of an observed release to air from site sources).

USEPA Pre-Remedial Program performed an assessment at the Niagara Falls Boulevard Site (NFB) in 2013-2014. Based on the Pre-Remedial Evaluation, the site did not meet the minimum criteria necessary to be placed on EPA's "National Priorities List", a list of hazardous waste sites in the U.S. which are eligible for long-term cleanup financed under the federal Superfund program. However, it was subsequently determined that material contaminated with radiation was located beneath the asphalt parking lot shared by the bowling alley and a building supply center. EPA determined that the Agency would further assess the site to determine if an action under EPA's short term, or "removal" program was warranted.

On June 16, 2015, OSC Daly was assigned as the lead on-scene coordinator for Niagara Falls Boulevard Radiological Site.

On July 13, 2015-July 17, 2015, OSC Daly, OSC Bellis and Weston mobilized at the NFB Site to continue assessment activities. The tasks included:

- Grid out all survey areas within the two buildings on-site
- Gamma delineation with two separate instruments (Ludlum 2241/Fluke PIC) inside the buildings.
- RAD 7 Radon/Thoron survey within the buildings
- Gamma survey and RAD 7 survey at designated outside areas
- SAM 940 spectrums were collected in areas that exhibited elevated gamma readings.
- OSC coordination tasks with
    - Owner/operator of Site
        - There are two operators at this site
    - Public Affairs
    - Legal Staff

Preliminary draft results indicate that there are no elevated gamma or radon/thoron readings within the occupied spaces of one building at the site. However, the second building exhibited some "hot spots" or defined areas that had elevated gamma readings. These areas appear to be portions of the building that were additions to the original building. Meaning, the construction of the additions occurred after the contaminated fill was in place and therefore, the radioactive material is located below the concrete slab of these sections.

OSCs and Weston tentatively plan to return to NFB Site the week of August 10, 2015 to perform radon canister sampling in both buildings as well as Geo Probe Soil Boring Sampling at specific points along the property that were not assessed by the Pre-Remedial Program.

On August 10, 2015-August 14, 2015, OSCs, Health Physicist and Weston returned to NFB Site to perform the following tasks:

- Gamma survey of the outside property with two separate instruments (Ludlum 2241/Fluke PIC)
- Radon Canister Sampling within both buildings at the site.
- Geo Probe Soil Boring Sampling at specific points along the property that were not assessed by the Pre-Remedial Program.
- RAD 7 Radon/Thoron survey at designated indoor areas as well as at all Soil Boring Sampling points.
- Reuter Stokes HPIC survey at designated indoor areas as well as at all Soil Boring Sampling points.
- Radiological Swipe Samples were taken at designated doorways and areas of interest inside both buildings.

All data is being compiled by OSCs and Weston for presentation to technical team.

From February 29, 2016 through March 3, 2016, OSC Daly, Health Physicist Nguyen and Weston returned to NFB Site to continue assessment activities. The tasks included soil boring sampling in the Greater Niagara Building Center (GNBC) unoccupied interior spaces which exhibited elevated gamma survey readings.

On March 18, 2016, OSC Daly submitted a draft Action Memo to management for finalization.

On April 6, 2016, OSC Daly and Weston initiated Site property boundary survey with subcontractor in order to identify property owners and eventually install physical parcel boundaries of the Site.

On April 27, 2016, OSC Daly and Weston continued Site property boundary survey with subcontractor. The installation of physical parcel boundaries markers were completed. A Weston structural engineer evaluated the GNBC areas that will need to be deconstructed in order to eventually remove the concrete and contaminated material within the designated areas.

On April 27, 2016, OSC Daly and Weston continued Site property boundary survey with subcontractor. The installation of physical parcel boundaries markers were completed. A Weston structural engineer evaluated the Greater Niagara Building Center (GNBC) areas that will need to be deconstructed in order to eventually remove the concrete and contaminated material within the designated areas.

On May 13, 2016, ERRD Director authorized verbal funding for the Site in the amount of $600,000 initiate the removal action.

On May 26, 2016, OSC Daly notified NYS DEC, NYS DOH and Niagara County officials of the proposed June 1, 2016 Site mobilization and submitted the NFB Fact Sheet.

USEPA has been coordinating with NYS, Niagara County and local representatives throughout the assessment process.

EPA will be distributing a Site Fact Sheet to the public prior to site mobilization for the removal action.

May 31, 2106 through June 1, 2016, Public Affairs Official, Mike Basile, distributed the NFB Site Fact sheet to local officials, neighboring businesses, schools and communities.

On June 1, 2016, OSC Daly, Health Physicist (HP) Nguyen, Guardian Environmental Services (GES) and Weston mobilized for the initiation of the removal action. Equipment provided by USEPA Region 02, USEPA-ERT, Weston and Guardian Environmental Services.

From June 1st through June 5th the following tasks/events occurred:

- HP Nguyen and GES Health & Safety Officer brief team on radiological safety and overall site safety.
- HP Nguyen established instrumentation and procedural quality control.
- GES started construction of storage room in GNBC in order to relocate operator business literature and construction samples. This was performed in order to prepare for concrete/material removal from one of the designated areas floor.
- GES started the removal of above ground vegetation from the northern wooded areas of the Site. Sections of this area are preliminary designated for office and storage trailers.
- HP Nguyen, OSC Daly and Weston determined air monitoring strategies while ground vegetation removal was conducted. Multiple Radeco (gamma air sampler) and Dust Track (particulate monitor) instruments were deployed. As of the date of this report, no filter samples or monitor readings were observed above background levels.
- Weston conducted gamma survey of the cleared wooded areas as well as the entire parking lot areas of the property.
- Weston performed grid out of GNBC room ST-5 and performed thorough gamma survey.
-

From June 6th through June 11th the following tasks/events occurred:

- It was determined that the northern wooded areas exhibited elevated gamma levels and will not be used for trailer staging. This location selected for trailer staging is the south eastern part of the parking lot that exhibited predominately background gamma survey readings.
- The fenced in wooded area on the east side of the Site was cleared. This is an area with known elevated gamma survey readings. During the clearing process, the skid steer was monitored as was the abandoned tires that were removed from the area. No elevated gamma readings were observed.
- Office trailers, storage containers and roll-off containers were mobilized. Swipe samples were taken inside these units to document a radiological baseline for each unit. No radiological levels were above background. GES installed flooring (wooden layer and tile) in any trailer that did not have a floor covering to ensure the flooring is able to be cleaned and/or removed if contamination is present prior to demobilization.

- The storage room in the GNBC construction was completed.
- The removal of property owner material from Warehouse #3 was relocated to storage container in preparation for interior utility survey mark out.

On June 10, 2016, reporter, Dan Telvock, from the Investigative Post visited the Site and conducted on camera interview with OSC Daly.

On June 10, 2016, NYS DEC Regional representative visited and took a tour of ongoing activities at the Site.

Planned activities for the time range of June 13-16, 2016

- Utility mark out in designated interior areas of GNBC.
- Start deconstruction of GNBC non-load bearing walls.
- Start concrete cuts in designated areas cleared by utility mark out.

USEPA has been coordinating with NYS, Niagara County and local representatives throughout the assessment/removal process.

From June 13th through June 16th the following tasks/events occurred:

- It was determined that the northern wooded areas exhibited elevated gamma levels and will not be used for trailer staging. This location selected for trailer staging is the south eastern part of the parking lot that exhibited predominately background gamma survey readings.
- The fenced in wooded area on the east side of the Site was cleared. This is an area with known elevated gamma survey readings. During the clearing process, the skid steer was monitored as was the abandoned tires that were removed from the area. No elevated gamma readings were observed.
- Office trailers, storage containers and roll-off containers were mobilized. Swipe samples were taken inside these units to document a radiological baseline for each unit. No radiological levels were above background. GES installed flooring (wooden layer and tile) in any trailer that did not have a floor covering to ensure the flooring is able to be cleaned and/or removed if contamination is present prior to demobilization.
- The storage room in the GNBC construction was completed.
- The removal of property owner material from Warehouse #3 was relocated to storage container in preparation for interior utility survey mark out.
- Public Affairs forwarded NFB fact sheet to local news agencies.
- Concrete floor samples from the GNBC Office Area and Warehouse #3 were sent out for analysis.
- In the GNBC Office Area, Electrical wiring has been rerouted from interior walls and all non-load bearing walls have been removed.

From June 20th through June 22nd the following tasks/events occurred:

- OSC Daly, HP Nguyen and GES T&D Coordinator attending Low Level Waste Management training

USEPA has been coordinating with NYS, Niagara County and local representatives throughout the assessment/removal process.

Anticipated Activities:

- Finalization of decon tent strategy for GNBC Office Room deconstruction.
- Development of Air filtering system for GNBC Office Room deconstruction.
- Cutting and removal of concrete flooring in GNBC Office Room.
- Removal of asphalt/slag layer and staging of material.
- Continue research into Transport & Disposal facilities/requirements.

From June 24th through July 12th the following tasks/events occurred:

- OSC Daly, HP Nguyen, Weston (2) and Guardian (RM, FCA, 2 Operators and 1 Tech) mobilized to Site on June 24, 2016.
- Decontamination tent construction outside of GNBC Office Area.
- Exhaust system and chimney constructed in GNBC Office Area.
- Particulate air monitoring and Radeco air monitoring conducted in the GNBC Office Area as well as strategic locations within other area of GNBC building and exterior of the building during interior operations.
- Multi-Rae was monitoring interior air quality (CO2, Oxygen) within the interior work space of GNBC Office Area throughout operations.
- GNBC Office Area concrete floor was cut, removed from area, sections scanned for radiological scan with pancake probe and swipes taken prior to relocating to secure storage container. No indication of contamination have been observed. Concrete will be disposed of as non-hazardous once conformational laboratory analysis results received.
- The removal of the asphalt/slag layer of GNBC Office Area was initiated. Material was placed in cubic yard boxes. The boxes were sealed prior to leaving the interior space. In the decon tent the boxes were swiped and swipe samples analyzed prior to boxes being relocated to secure storage container.
- All personnel within the GNBC Office Area were in appropriate PPE and were scanned with pancake probe within the decon tent prior to removal of PPE to determine if any removable contamination is leaving the building. No above background readings were observed during activities during this report time range.
- On July 5, 2016, the Dan Telvock news report was released via newspaper, internet and Channel 2 news broadcast. This report covered potential/existing radiological sites within the Niagara County area. Some information was based on in-person interview with OSC Daly on June 10, 2016. Both Niagara Falls Boulevard and Holy Trinity Sites were mentioned in the news piece.
- There have been a few episodes of vandalism at the office trailer portion of Niagara Falls Boulevard Site located on 9626 Niagara Falls Boulevard. The portable toilets have been knocked over twice. More recently when the Site crew was off over the July 4th break (off on July 3rd and 4th). When OSC and crew returned to the site on July 5th both portable toilets were on their sides. The portable toilets are subcontracted by USEPA Contractor Guardian Environmental Services (GES). The portable toilet company informed GES that during our week break in June (June 17-23), the toilets were tipped then as well. A police report was filed with the Niagara Falls Police Department. On July

7th, police officers toured Site with OSC and obtained more information regarding the vandalism. On July 13th, motion sensor lights were installed in the office trailer area.

- On July 13, 2016, OSC Daly requested verbal increase of $1,400,000.00 for a total project ceiling of $2,000,000.00 to continue the emergency Comprehensive Environmental Response Compensation and Liability Act (CERCLA) removal action at the Niagara Falls Boulevard Site.
- Late afternoon July 13, 2016, U.S. Senator Charles E. Schumer put out a press request to urge the U.S. Environmental Protection Agency (EPA) to conduct an updated and comprehensive assessment of the numerous radioactive hotspots in Niagara County and the Grand Island area. This request appears directly related to recent news reports covering the Niagara Falls Boulevard Site, the Holy Trinity Site and other areas of interest in Niagara County.
- The last day working on Site was July 13, 2016 for this tour.

Anticipated Activities:

- Mobilize back on Site August 1, 2016.
- Stabilization of GNBC Office structure due to newly discovered inefficient roof support and suspect perimeter wall footers. The construction of this addition was not by code and necessary steps must be taken to stabilize structure in order to continue work. Permanent measures must be taken to bring this structure up to code.
- Continuation of the excavation and staging of contaminated material from GNBC Office Area.
- Begin removal of asphalt, excavation of contaminated material from specific sections of the parking lot and staging.
- Initiate excavation and staging of contaminated material from other internal spaces within GNBC structure.
- Post excavation sampling, analysis of GNBC Office footprint and other excavated areas.
- Backfilling of cleared excavated area with clean fill.
- Bid out transport and disposal of contaminated material.

USEPA has been coordinating with NYS, Niagara County and local representatives throughout the assessment/removal process.

Response Actions to Date

7 Cubic yard boxes of radiological contaminated material was removed from the GNBC Office Area and staged in secured containers during this time period.